

ZION-MOUNT CARMEL HIGHWAY,
ZION-MOUNT CARMEL HIGHWAY SHORT TUNNEL
Zion National Park
Through rock spur on Zion-Mount Carmel Highway
Rockville vicinity
Washington County
Utah

HAER NO. UT-39-H

HAER
UTAH
27-SPDA.V,
3H-

PHOTOGRAPHS

ADDENDUM TO:

Zion-Mount Carmel Highway, Short Tunnel
Zion National Park
Through rock spur on Zion-Mount Carmel Highway
Springdale Vicinity
Washington County
Utah

HAER No. UT-39-H

HAER
UTAH
27-SPDA.V,
3H-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

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HISTORIC AMERICAN ENGINEERING RECORD

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Photographs UT-39-H-1 to UT-39-H-7 were previously transmitted to the Library of Congress.

Documentation: 8 exterior photographs (1991)

Arnold Thallheimer, Photographer, August, 1991

- UT-39-H-8 OVERALL VIEW SHORT TUNNEL OPENING, NORTHWEST END, LOOKING WEST.
- UT-39-H-9 CLOSE-UP LEFT SIDE SHORT TUNNEL TO BE WIDENED, NORTHWEST END, LOOKING SOUTHWEST.
- UT-39-H-10 OVERALL VIEW SHORT TUNNEL OPENING, SOUTHWEST END, LOOKING NORTHEAST.
- UT-39-H-11 CLOSE VIEW SHORT TUNNEL OPENING, WITH PARKING AREA, LOOKING NORTHEAST.
- UT-39-H-12 DETAIL SHORT TUNNEL OPENING, LOOKING EAST.
- UT-39-H-13 OVERALL VIEW OF DRAINAGE UNDER ROAD, NORTHEAST END, RIGHT SIDE OF ROAD, LOOKING SOUTH.
- UT-39-H-14 DRAINAGE UNDER ROAD, NORTHEAST END, LEFT SIDE OF ROAD, LOOKING NORTH.
- UT-39-H-15 CLOSE-UP DETAIL OF DRAINAGE UNDER ROAD, NORTHEAST END, LEFT SIDE OF ROAD, LOOKING NORTH.

HISTORIC AMERICAN ENGINEERING RECORD

**ADDENDUM TO:
ZION-MOUNT CARMEL HIGHWAY, SHORT TUNNEL**

HAER
UTAH
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I. INTRODUCTION

Location: Milepoint 40.12 on the Zion-Mt. Carmel Highway,
State Route 9, Springdale Vicinity, Washington
County, Utah.

Qued: Springdale East, Utah

UTM: 12/330440/4120580

Date of Construction: 1930

Present Owner: State of Utah

Present Use: Tunnel

Significance: The development of the Zion-Mt. Carmel Highway
is significant to the development of the National
Parks in Utah and Arizona. Access to the four
parks in this area, Bryce Canyon, Grand Canyon,
Cedar Breaks and Zion National Park was greatly
improved with the building of the highway. Each
component of the highway system is important as
it relates to the development of this area and
tourism as a major industry in Utah and Arizona.
Due to the rugged terrain in Zion National Park,
each bridge and tunnel was integral to the
highway's completion.

Historian: Julie W. Osborne. Office of Burtch W. Beall, Jr.,
FAIA, Architect, Salt Lake City, Utah. December
1992.

II. HISTORY

A. NEED FOR HIGHWAY

The development of Bryce Canyon, Cedar Breaks, Grand Canyon and Zion National Parks increased tourism in southern Utah and created a demand for better highways. A connecting link between these National Parks was necessary to eliminate a detour of 175 miles¹.

The problem, as described by Howard Means, Utah State Road Engineer was the connection between highways 89 and 91. At the time, there were two connecting routes between these highways. The northern connection was Bear Valley Road, which ran southeast from Paragonah, over a high summit, to Alton. However, this route was only open for travel during the summer, with unfavorable weather conditions making travel impossible in the winter. The southern connection between highways 89 and 91 was equally undesirable. This route required travel through northern Arizona, from Fredonia to Hurricane. According to Means, this route was unacceptable for tourists since it entailed traveling an extra 175 miles in order to visit Zion, Cedar Breaks and Bryce.²

The Federal Bureau of Public Roads wished to eliminate the detour, and the search for a connecting link became a priority. In 1923, a study of the area was initiated by the Federal Bureau of Public Roads and the Utah State Road Commission, and with the help of the House Committee for the National Park Service³, the determination was made to build the Zion-Mt. Carmel Highway.

B. DEVELOPMENT OF THE ZION MT. CARMEL HIGHWAY

The rugged terrain of the Zion area was a major obstacle to overcome in the development of the plan to build the Zion-Mt. Carmel Highway. After extensive study by Howard C. Means, it was determined that 25 miles of road should be built between the Park and Mt. Carmel, with 15-1/2 miles of the road outside the Park. The 8-1/2 stretch inside the park cost approximately \$1,500,000⁴. A total of four bridges and two tunnels were constructed in the Park section of the Zion-Mt. Carmel Highway.

III. SHORT TUNNEL

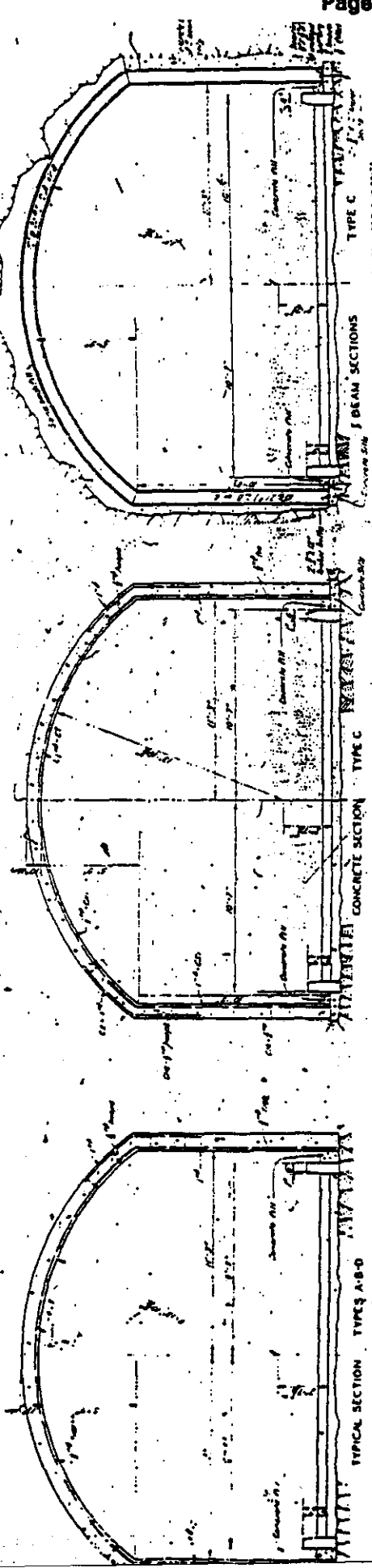
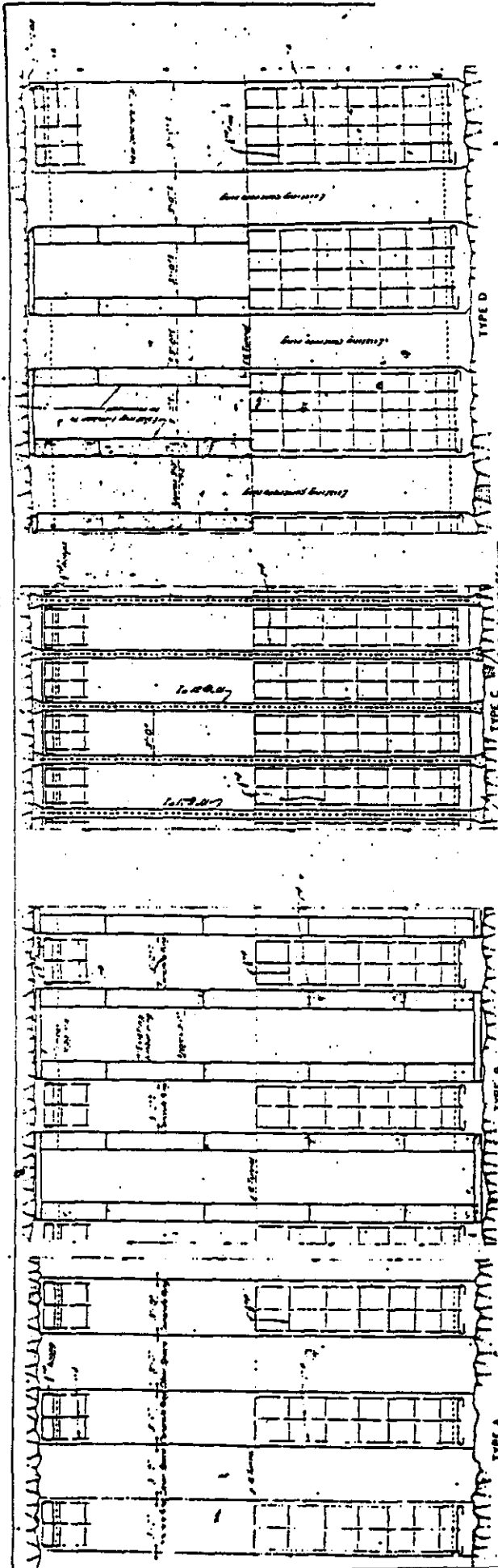
A short road tunnel was included as part of the Zion-Mt. Carmel Highway. Located at milepoint 40.12, the length of the tunnel is 480 feet and it is 19.7 feet wide. There is a clearance of 13 feet 1 inch in the middle of the tunnel, with a 10 feet 4 inch clearance on the perimeter. The short tunnel was built in 1930 and reconstructed in 1960.⁵ The natural chiseled-rock appearance has been maintained with a gunnite covering of the natural rock. The designer designated on the original drawings is O.C. Lockhart.⁶ There are 2" X 2" negatives of the original drawings on file at the Utah Department of Transportation.

IV. PROJECT INFORMATION

This Historic American Engineering Record (HAER) recording project was conducted to provide a record of the tunnel before it was widened. Burtch W. Beall, Jr., FAIA, Architect, with the assistance of Julie Osborne, were responsible for researching and writing histories for Clear Creek Bridge, Co-op Creek Bridge, and the Short Tunnel in Zion National Park. This report was prepared during autumn and winter of 1992. Arnold Thalheimer photographed the tunnel in 1991.

IV. ENDNOTES

1. Howard C. Means, "Autobiography of Howard C. Means" (Salt Lake City, Utah: Dictated for the files of The Utah State Historical Society, 1947-48).
2. Means, "Autobiography of Howard C. Means".
3. Angus M. Woodbury, A History of Southern Utah and Its National Parks (Salt Lake City, Utah: By the Author, 1950), p. 206.
4. Ibid.
5. Structural Inventory and Appraisal Sheet, National Bridge Inventory (Salt Lake City, Utah: Utah Department of Transportation, 3/27/92).
6. Negatives of Original Construction Drawings, "Tunnel Lining" (Salt Lake City, Utah: Utah Department of Transportation).



TUNNEL LINING

NOTES:
 1. All dimensions are in feet and inches.
 2. All dimensions are to the center of the lining.
 3. All dimensions are to the center of the lining.
 4. All dimensions are to the center of the lining.
 5. All dimensions are to the center of the lining.

1V. BIBLIOGRAPHY

A. BOOKS

Woodbury, Angus M. A History of Southern Utah and Its National Parks. Salt Lake City, Utah: By the Author, 1950.

B. MISCELLANEOUS

Means, Howard C. "Autobiography of Howard C. Means". Salt Lake City, Utah: The Utah State Historical Society, 1947-48.

Negatives of Original Construction Drawings, "Tunnel Lining" Salt Lake City, Utah: Utah Department of Transportation.

Structural Inventory and Appraisal Sheet, National Bridge Inventory. Salt Lake City, Utah: Utah Department of Transportation, 3/27/92.